

REMARKS

By this amendment, claims 24, 32, 33, and 37 have been amended. Claims 24-38 are pending in the application. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claim 24 has been amended to recite, *inter alia*, "exposing at least a portion of said at least one current emitter arranged in an open area located inside of said flat panel display to a hydrogenation process." (emphasis added) Support for this amendment may be found at least at paragraph [0021] of the specification, which describes an open area 126, at FIG. 2, which shows that the tip 118 of the current emitter 116 is arranged in the open area 126, and at paragraph [0027], which states that "[t]he tip 118 is then treated with PECVD hydrogenation 322". It is clear from FIG. 2, that the open area 126 is located inside of the FED device 100. Support for the amendments to claims 32, 33, and 37 is similarly provided.

Claims 24-25, 29, and 32 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Niiyama. This rejection is respectfully traversed.

Claim 24, as amended, recites, *inter alia*, "exposing at least a portion of said at least one current emitter arranged in an open area located inside of said flat panel display to a hydrogenation process." Niiyama does not disclose this feature. The Office Action states that the broadest reasonable interpretation of a current emitter can include the cathode conductive layer 101 of Niiyama and implies that forming the hydrogenated amorphous silicon resistive layer 102 on the cathode conductive layer 101 meets the limitation of "exposing at least a portion of said at least one current emitter...to a hydrogenation process." (Office Action, page 2).

Applicants respectfully disagree and submit that by characterizing the cathode conductive layer 101 as a current emitter the Office Action has put forward an unreasonable interpretation of the term “current emitter” that is inconsistent with the meaning that the term would have had to a person of ordinary skill in the art. During examination, words of a claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Phillips v. AWH Corp., 415 F.3d 1303, 1313, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc).

The present specification and the specification of Niiyama cited by the Office Action as prior art makes it clear that a person of ordinary skill in the art would have understood the meaning of the term “current emitter” to include only an element capable of emitting a flux of electrons directly from the surface of the element through an open space. For example, the present specification states that “in FED structures and devices a plurality (array) of microelectronic emission elements are employed to emit a flux of electrons from the surface of the emission element(s).” (specification, paragraph [0007]). In the embodiment shown in FIG. 2 of the present specification, the current emitter is designated as element 116, and may emit a flux of electrons through the open space 126 to strike a faceplate panel containing phosphors 130. (specification, paragraph [0027]). Similarly, in FIG. 4, Niiyama shows an element 105 defined as an “emitter” and arranged in a through-hole 106, which may emit electrons into the open space of the through-hole 106. (column 6, lines 1-12). Niiyama makes it clear that the emitter 105 and the cathode conductive layer 101 are separate and distinct elements at column 6, lines 30-33, where Niiyama states that “[t]he field emission type fluorescent

display device thus constructed, as described above, includes the resistive layer 102 arranged between the cathode conductive layer 101 and the emitter 105.”

Furthermore, by improperly characterizing the cathode conductive layer 101 of Niiyama as a “current emitter” the Office Action has implicitly defined a “current emitter” to include any element that conducts current. Therefore, by the Office Action’s definition of “current emitter,” every component of the field emission type fluorescent display device of Niiyama would be a current emitter, including the emitter 105, the resistive layer 102, the cathode conductive layer 101, the lines bringing power to each field emission cathode, and every current conducting element of the device all the way down to the plugs that connect the device to an electrical outlet. In light of this result, it is clear that the Office Action’s interpretation of the term “current emitter” is overbroad and unreasonable.

Furthermore, even if the Office Action is maintained and continues to characterize the cathode conductive layer 101 of Niiyama as a “current emitter,” Niiyama does not anticipate claim 24 because Niiyama does not teach that the cathode conductive layer 101 is “arranged in an open area located inside of said flat panel display” as recited by amended claim 24. To the contrary, Niiyama teaches that the cathode conductive layer 101 is arranged under the resistive layer 102 and away from the through-hole 106. (FIG. 4). The Office Action states that “the broadest reasonable interpretation of “arranged in an open area” can include a layer having no addition layers deposited over it.” (Office Action, page 2). Applicants respectfully submit that the “open area” over a layer of a flat panel display having no additional layers arranged over it cannot reasonably be interpreted to be “located inside” of a flat panel display. Claims 32, 33, and 37 contain similar limitations and are allowable for similar reasons.

Since Niiyama does not disclose all the limitations of claims 24 and 32, these claims are not anticipated by Niiyama. Claims 25-31 depend from claim 24 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection of claims 24-32 be withdrawn.

Claims 26-28 and 32-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Niiyama in view of U.S. Patent No. 5,902,650 ("Feng"). This rejection is respectfully traversed.

The Office Action fails to establish a *prima facie* case of obviousness at least because Niiyama in view of Feng, even if properly combinable, do not teach or suggest every element of independent claims 33 and 37. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As discussed above, claims 33 and 37 contain similar limitations to claims 24 and are allowable at least for similar reasons. Furthermore, Feng does not cure the deficiencies of Niiyama. Similarly to Niiyama, Feng only teaches that a "device 50 is formed by depositing a resistive layer 52 of amorphous silicon based film on a glass substrate." (column 5, lines 31-33). Therefore, Niiyama in view of Feng, even if properly combinable, do not teach or suggest all the claim limitations of claims 33 and 37.

Since Niiyama and Feng do not disclose all the limitations of claims 33 and 37, these claims are not anticipated by Niiyama. Claims 34-36 depend from claim 33 and are patentable at least for the reasons mentioned above. Claim 38 depends from claim

37 and is patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection of claims 33-38 be withdrawn.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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